(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 June 2005 (09.06.2005)

PCT

(10) International Publication Number
WO 2005/053043 A1

(51) International Patent Classification[7]: H01L 33/00

(21) International Application Number:
PCT/KR2004/003045

(22) International Filing Date:
24 November 2004 (24.11.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2003-0084173
25 November 2003 (25.11.2003) KR

(71) Applicant *(for all designated States except US)*: **SSI** [KR/KR]; 594-1 Seongbon-ri, Daeso-myun, Eumseong-gun, Chungcheongbuk-do 369-823 (KR).

(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: **PARK, Jun-Kyu** [KR/KR]; 721-602 Solgeo Apt., Sanbon-dong, Gunpo-city, Kyungki-do 435-040 (KR).

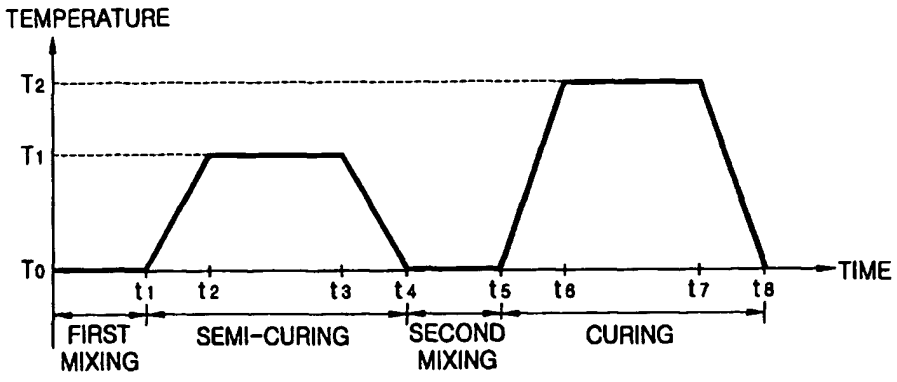
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MANUFACTURING METHOD FOR WHITE LIGHT EMITTING DIODE DEVICE INCLUDING TWO STEP CURE PROCESS



(57) Abstract: Provided is a method of manufacturing a light emitting diode (LED) device which has excellent optical properties. The method includes: mixing a main gradient with a curing agent at room temperature to obtain the liquid epoxy resin; semi-curing the liquid epoxy resin at 70-1000°C under 1-30 torr; adding a phosphor to the semi-cured liquid epoxy resin at room temperature and mixing the phosphor and the semi-cured liquid epoxy resin to obtain a mother resin mixed with the phosphor; feeding the obtained product into an element to be molded comprising a LED chip; and completely curing the mother resin at 120°C or higher under an ambient pressure.

WO 2005/053043 A1